

IN THE CLAIMS:

Please amend Claims 11, 13, 14, 16 and 18 to read as follows.

Claims 1-10. (Cancelled)

11. (Currently Amended) An exposure apparatus comprising:
a projection optical system of a catadioptric type; and
an optical element disposed on a reciprocating light path of said projection optical system, said optical element being movable along an optical axis of said projection optical system to change aberration of said projection optical system to be produced due to exposure.

12. (Previously Presented) An apparatus according to claim 11, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.

13. (Currently Amended) An apparatus according to claim 11, wherein the aberration is produced as a result of at least one of a pressure, heat and an illumination condition.

14. (Currently Amended) An exposure apparatus comprising:
a projection optical system of a catadioptric type, said projection optical system including (i) a first mirror for reflecting light from a light source thereby to define a reciprocating light path, and (ii) a second mirror disposed at a position not intercepting a path of the light from the light source to the first mirror, for directing light from the first mirror along a one-way light path off the reciprocating light path; and
an optical element disposed on the reciprocating light path of said projection optical system, said optical element being movable along an optical axis of said projection optical system to change aberration of said projection optical system.

15. (Previously Presented) An apparatus according to claim 14, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.

16. (Currently Amended) An exposure apparatus comprising:
a projection optical system of a catadioptric type;
an optical element disposed on a reciprocating light path of said projection optical system; and
an actuator for actuating said optical element along an optical axis of said projection optical system to change aberration of said projection optical system.

17. (Previously Presented) An apparatus according to claim 16, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.

18. (Currently Amended) An exposure apparatus comprising:
a projection optical system of a catadioptric type, said projection optical system including an optical element disposed on a reciprocating light path of said projection optical system at a position where a light passing region of the light traveling along a forward light path and a light passing region of the light traveling along a backward light path are overlapped with each other, said optical element being movable along an optical axis direction of said projection optical system.

19. (Previously Presented) An apparatus according to claim 18, wherein said optical element is movable to change aberration of said projection optical system.

20. (Previously Presented) An apparatus according to claim 19, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.